



INVITED PAPER

Psychometric sifting to efficiently select the right service employees

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Abstract

Purpose – Service employees in subordinate service roles are crucial for operational efficiency and service quality. However, the stressful nature of these roles, inappropriate hire selection, and the proliferation of job boards have created massive recruitment problems for HR departments. The purpose of this paper is to highlight the growing costs of recruiting the right candidates for service roles while offering an alternative approach to recruitment that is more efficient and effective than the traditional approach.

Design/methodology/approach – The study offers empirical evidence of five instances in which the use of psychometric sifting procedures reduced recruitment costs, while improving the quality of the resultant hires.

Findings – By standing the traditional recruitment process “on its head” and using psychometric tests at the start of the selection process, the recruitment process can be significantly improved. Such tests efficiently weed out unsuitable candidates before they even enter the recruitment process, leaving a smaller, better-qualified pool for possible recruitment.

Practical implications – Firms can safely use the psychometric sifts to select applicants according to their operational efficiency, customer orientation, and overall performance. This paper illustrates the use of both traditional questionnaire measures and situational judgment tests to remove unsuitable applicants at the start of the selection process. A real-life case study suggests that such an approach increases the hiring success rate from 6:1 to 2:1. In the opening of a new supermarket by a UK group, this process saved 73,000 hours of managers’ time, representing \$1.8 million savings in opening costs.

Originality/value – The paper offers a viable cost-saving alternative to a growing problem for HR departments in service firms and provides directions for further research.

Keywords Recruitment, Dependability and safety instrument, Psychometric test, Recruitment efficiency, Selection, Service employees, Subordinate service roles, Recruitment effectiveness, Situational judgement test

Paper type Research paper



1. Introduction

Service employees in subordinate service roles are crucial for operational efficiency and service quality (Bowen and Schneider, 2014). By their very nature, these roles are stressful, and as such, inappropriate selection and recruitment causes high levels of churn. A combination of this and the proliferation of job boards have created massive problems for HR departments – namely, sifting through hundreds of thousands of

applicants. However, this important applied problem has attracted little academic research.

The purposes of this paper are threefold. First, it highlights the growing costs of recruiting the right candidates to occupy subordinate service roles. Second, it offers an alternative approach to recruitment that is more efficient and effective than the traditional approach. The standard hiring process starts with a review of resumes, followed by telephone or face-to-face interviews with the most promising candidates, and then draws on various tests, such as psychometric tests, to determine the applicants with the best fit. This study shows that service firms can reduce costs and hire more suitable workers by standing this traditional recruitment process “on its head” and using web-based short and powerful psychometric sifting tests at the start of the recruitment process rather than at the end. Such tests efficiently weed out significant numbers of unsuitable candidates, leaving a smaller, better-qualified pool to undergo the more costly personalized steps of the recruitment process. In addition, the findings show that the resultant candidates are better suited to their frontline roles than those selected through the traditional hiring process. Third, this paper offers directions for further research on the efficiency and effectiveness of recruitment processes in service organizations.

2. The importance of frontline employees and their recruitment

2.1 The importance of frontline service employees

Service personnel are part of the operation of any service firm, and thus they can significantly affect the operational efficiency of the service (Chase and Tansik, 1983; Chase, 1984). Frontline personnel serve as the “human face” of services and their service orientation can dramatically affect service quality (Heracleous and Wirtz, 2010). Bitner *et al.* (1990) showed that “following the script” and merely delivering a service created only 50 percent of satisfactory customer experiences. The balance came from what they called “spontaneous staff behavior.” Equally concerning, 50 percent of all dissatisfactory experiences were due to spontaneous staff behavior.

Unlike in manufacturing, frontline workers in service organizations are in constant contact with customers. Evidence shows that employee and customer satisfaction are highly correlated (Schneider, 1980; Schneider and Bowen, 1993; Schneider *et al.*, 1998; Brown and Kam, 2008; Bowen and Schneider, 2014). In addition, the strength of relationships between customers and employees is often an important driver of customer loyalty (Bove and Johnson, 2001; Castro *et al.*, 2004).

2.2 The churn of frontline service employees

Frontline service employees have stressful boundary-spanning roles (Thompson, 1962). Personnel sit on the boundary of the organization and interact with both the customer and the organization, particularly with its policies and procedures. They are responsible for establishing the balance between their two roles: in customer contact and as “factory workers.”

Such boundary-spanning roles are characterized by role ambiguity and conflict (Shamir, 1972), causing conflicts for the employees occupying them. For example, they may be required to convey a role that is incongruent with their self-image or be conflicted with the demands of the customer vs the rules and procedures of the organization. They can even be caught between two customers with conflicting demands (Lovelock and Wirtz, 2011) – for example, when they are requested by a diner to ask other guests to speak more quietly.

Research has shown that role conflict and ambiguity lead to dissatisfaction, frustration, and turnover intentions in many different settings (Shamir, 1972). In addition, the ability to cope with such stress depends on the extent to which the employee perceives the role as subordinate. Professional service roles allow people to “defend themselves” from conflict. Unfortunately, the majority of frontline service jobs are “subordinate service roles,” which typically fall on the lowest rung of the organizational hierarchy. Frontline personnel are also treated as subordinates by customers, a role often reinforced by prominently displayed signs and service charters that insinuate that the “customer is important” and/or “the customer is always right” (Hochschild, 1983). Therefore, it is hardly surprising that high levels of churn are typical of such subordinate service roles.

2.3 The key role of recruitment

Schneider *et al.* (1998) suggested that service firms are successful insofar as they can create a “climate for service” within the organization. This climate supports the individual within the subordinate service role and mitigates some of the inherent conflicts and ambiguities. Wirtz *et al.* (2008) examined the case of Singapore Airlines and suggested that an integrated HR system is indeed the key to service excellence. Hoffman and Bateson (2011) went further to suggest that such HR levers affect the service climate that is the precursor for service excellence. Rogg *et al.* (2001) argued that it is the bundles of different HR management practices, rather than individual practices, that have the largest effect.

Cheung (1994) focussed on service orientation of the individual and suggested that a discrepancy between the levels of service orientation demanded by the role and the inherent service orientation of the individual could itself lead to job stress, dissatisfaction, and other negative outcomes for employees. The concept of an inherent individual service orientation was advanced as early as 1984 by Hogan *et al.*, who suggested that individuals with stable personalities have different propensities to serve others. Such propensities are tied to the distinction between task and context performance. Context performance activities are important because “they contribute to organizational effectiveness in ways that shape the organization’s social and psychological context that serves as the catalyst for task activities and processes” (Borman and Motowildo, 1997, p. 100). These activities are clearly related to the concept of organizational citizenship behavior (OCB) (Smith *et al.*, 1983), which includes helping and co-operating with others to accomplish a task.

Recruitment of individuals is a core part of the HR system in any organization. It is essential for creating the correct organizational climate and for selecting individuals with the right level of service orientation for the particular role (Ployhart *et al.*, 2009).

3. The scale of the sifting problem

High levels of churn are not uncommon across many service roles and have affected firms for a long time. What has amplified the sifting problem for HR departments is the growth in the number of applicants per job, which has led to ballooning recruitment costs. This increase in the number of applicants is largely due to the growth of job boards and also the recessionary environment.

In 1994, Jeff Taylor registered a web site called Monster.com, which was the first job board. Since then, thousands of similar sites have been launched. These boards have had a profound effect around the world in the sourcing of candidates. Job boards

have multiplied the number of applicants for each job because of the ease of application combined with a greater catchment area. For example, a recent survey of recruiters in large US companies showed that the average number of applicants per job in the USA was 118 in the fourth quarter of 2011 (Kwong, 2012). The same survey showed that only 35 percent of these applicants met the basic education and skills requirement for any given post. The survey suggested that “serial applicants,” or job seekers who apply online to several positions concurrently, were the reason for the high number of poorly performing applicants. Respondents to the survey suggested that the screening of resumes was taking an average of 9.5 hours per job and that the large number of submitted resumes was driving significant increases in recruitment costs.

Applicants per job in the UK have not reached the same level as that in the USA. However, there was an average of 21 applicants per job across all jobs on the leading job board in the UK as of the fourth quarter of 2012, and a high variation occurred among the types of highly applied subordinate service jobs (see Table I). For example, in the UK call center industry, job boards, and web application increased the applicants-to-job ratio from 16:1, before the recession, to 26:1 in 2011. The UK call center industry is estimated to employ one million people in a mixture of in-house and outsourced centers. The 2011 level of churn was 46 percent, implying the need to fill 460,000 vacancies per year. Recruitment departments within the industry are therefore screening nearly 26 applicants for each of the 460,000 jobs, which adds up to approximately 12 million resumes per year.

The recruitment cost implications of the churn and number of applicants are staggering. For example, 119,000 sales jobs turned over within the retail network of the Sears Merchandising Group in one year. The cost of hiring and training each new assistant was \$900 (more than \$110 million in total). This sum represented 17 percent of Sears’ income that year (Ulrich *et al.*, 1991). In addition, it only covered the direct costs, and evidence suggests that these direct costs significantly underestimate the total costs of churn (Tracey and Hinkin, 2006). Newly hired staff require time and training to be competent. As such, there is built-in inefficiency in the operations of the hiring company, and new staff are less likely to provide quality service experiences to their customers.

Having an efficient recruitment process is therefore essential to every service organization. However, efficiency cannot come at the expense of effectiveness. The recruitment process must select individuals who can cope with the operational and customer service demands of these subordinate service roles. Failure to do so will lead to a vicious cycle of bad service, dissatisfied customers, staff dissatisfaction, high churn in staff, and the need for more recruitment (Cheung, 1994).

Applicants per advertised position (applicants/job)

Secretarial	41
Customer service	34
Retail	31
Catering	25
Travel and leisure	20

Note: Data retrieved from Totaljobs.com and analyzed by the authors

Source: Totaljobs Barometer (www.totaljobs.com, 2012)

Table I.
Customer service role

4. A new paradigm for sifting

Traditional approaches to screening candidates have started with an informal or formal scoring of resumes. This process is itself fraught with problems due to the growing trend of candidates who embellish their resumes. Kroll International (2011) recently published the results of its background checks of resumes; it found that 42 percent of resumes screened contained inconsistencies between the information provided by the candidate and Kroll's verification checks. Specifically, applicants tended to exaggerate employment and education history. This is problematic because these embellished factors are often precisely those that weigh heavily in the evaluation of candidates, and especially so when many resumes are screened.

Reviews of resumes might traditionally be followed by telephone or face-to-face interviews. Final short-listed candidates can then be tested using psychometric instruments. The role of psychometric testing on such staff is common and has proven efficacy. For example, research has shown that traditional "service orientation" instruments published by several companies (e.g. CEB Talent Measurement Solutions CCSQ, the Hogan Service Orientation scale, PDI Customer Service Inventory) improve the quality of selection for the "human face" role (for reviews, see Hogan *et al.*, 1984; McLellan and Paajanen (1994); Frei and McDaniel, 1998). Such instruments rely on a multi-trait approach – that is, measuring patterns of personality traits (behavioral indicators) associated with good performance in customer service jobs. Because of the cost and inconvenience of paper-and-pencil administration, such tests were traditionally used only on the final short-listed candidates. They compare candidates with a pre-defined competency model that contains a set of behavior patterns proved to predict on-the-job performance.

This process of resume sifting, followed by interviews, and then psychometric testing is inefficient and expensive. Building on advances in internet-delivered psychometric testing, we propose turning the selection process upside down and starting with psychometric testing (Bateson *et al.*, 2013). This approach capitalizes on the increased use of online application processes and changes in the tests themselves. The sheer volume of candidates has already produced a change in the application process, in which web-based recruitment workflow systems linked to application sites have become more common. In addition, psychometric tests for service employees have been adapted and validated for web delivery.

At the same time, there has been a shift in the statistical "technology" used in test development. The use of item response theory instead of classical test theory has shortened tests without reducing their ability to discriminate between candidates. The more modern item response theory focusses on the performance of individual items/questions and thereby allows only the questions with the highest predictive power to be selected. All these developments facilitate the use of short tests early in the online recruitment process. Candidates arriving at an application landing pad for a role can be asked to complete tests after providing minimal personal data and before being allowed to submit a resume. Real-time scoring allows candidate applications to be terminated at this point, often with a promise of an early e-mail response, which can be generated by the system.

Such an approach offers significant efficiency gains because it can sift out many candidates before their arrival at stages that require manual intervention. Many resumes of applicants who do not meet key requirements are thus removed early from the recruitment process at minimal costs.

5. The effectiveness of sifting

For such sifting to be effective, the tests clearly must capture requirements for suitable candidates for the role and reject unsuitable candidates. That is, the odds of good candidates going on to later stages of the process must be improved to offer significant cost savings to HR departments. Service personnel have dual roles. They are part of the production process and thus are “service factory workers,” but they are also the human face of the organization. Both dimensions can be used for sifting. We illustrate the effectiveness of the proposed sifting approach with a series of case studies in which sifting has been tested for different purposes, using different sifting instruments.

5.1 Selecting service personnel for improved efficiency

The first study involved 136 customer service advisers for a UK energy company. Absenteeism is a key operational problem for service firms trying to reduce costs and maintain service quality. Absenteeism has been attributed to role conflict and ambiguity of subordinate service roles.

The dependability and safety instrument (DSI) deployed in this study is typical of the new generation of sifting tools and was developed by CEB Talent Measurement Solutions, a leading test publishing company. Dependability as a personality dimension has been shown to be an important predictor of various performance dimensions, including keeping time, meeting expectations, and coping with pressure. The questionnaire consists of only 18 statement pairs. Respondents are asked to indicate which statements are “most like me” or “neither.” Research has shown that such forced choice scoring mitigates the tendency of candidates to try to project a personality suitable for the job (Christiansen *et al.*, 2005). The test is easy to complete and can be equally deployed through online administration or a simple paper-and-pencil test, by telephone with no reduction in the quality of the assessment (Burke *et al.*, 2010). Scores are classified to allow recruiters to set “cut scores” and reject chosen percentages of candidates at the start of the process.

Longitudinal studies are rare, with tests used for selection and final outcomes assessed many months later. Instead, existing employees are tested, and their performance on different outcomes measures predicted. Each of the company’s customer service agents had a known rate of absenteeism as measured from the last 12 months of their employment. The agent was then tasked to complete the DSI. DSI score bands were compared with absences measured during the last 12 months to simulate a sifting-out process. Table II presents the results.

Using the DSI as a tool to sift out unsuitable candidates by de-selecting the lowest 30 percent of candidate scores would have significantly improved the quality of the candidates going through to the more expensive stages of the recruitment process. It also increases the chances of advancing applicants with low tendencies for absenteeism. Some good candidates would be rejected, but significant recruitment cost savings would be made. In addition, it is unclear whether those “good” candidates would have been

DSI band	Sifting for absenteeism		Odds
	Zero absences (%)	1 or more absences (%)	
Lowest 30%	18	82	1:5
Top 30%	41	58	1:1
Total	39	61	1:2

Table II.
Absenteeism in
2007 vs DSI rating

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successfully identified and recruited in the traditional process approach. Subsequently, DSI was successfully adopted into the recruitment process of this company.

The second example of sifting on operational efficiency involved 72 drivers in a security company. Again, the DSI scores and a set of service operation measures important to the company were known for each driver. Records were available for the last six months for vehicle accidents for which the driver was held responsible and for attacks during which the driver and his or her team had been the victims. Tables III and IV provide the results.

Sifting out the bottom 30 percent of candidates on the DSI score for accidents would have significantly improved the quality of the candidate pool entering the process by reducing the chances of hiring drivers who would be involved in accidents and be subject to attacks. Drivers with scores in the bottom 30 percent had a 20 percent incidence of accidents (i.e. 1:4 chance of being involved in an accident), whereas those in the top 30 percent had only a 4 percent incident of accidents (i.e. a 1:25 chance).

The results from the observation on attacks to vehicles are just as powerful. Those same low-scoring drivers had a 41 percent chance of being subject to an attack, compared with only 15 percent of drivers ranked in the top 30 percent. Managers suggested that this was due to low-scoring drivers being less conscientious about following the safety and security rules and procedures. Sifting based on the DSI score would have reduced the number of resumes that needed to be reviewed significantly, while mitigating accidents at the expense of a few good candidates who would be sifted out erroneously.

5.2 Sifting for customer service orientation

With regard to sifting for the all-important “service orientation,” five different studies were performed (again using the DSI) across various industries: hotel, telecommunication, customer service, retail shops, and video outlets. The studies were also performed across two continents: Australia and Europe. Existing employees were tested after six to 12 months in the company. The DSI scores were compared with managers’ ratings of an individual employee’s customer service orientation on a standard scale (Taylor *et al.*, 2004). Managers involved in the rating process had at least six months of experience with each employee.

Table III.
Accidents in last six months vs DSI rating

DSI band	Sifting for operational efficiency		Odds
	Zero accidents (%)	1 or more accidents (%)	
Lowest 30%	80	20	1:4
Top 30%	96	4	1:25
Total	95	5	1:20

Table IV.
Attacks to vehicles in last six months vs DSI rating

DSI band	Sifting for operational efficiency		Odds
	Zero attacks (%)	1 or more attacks (%)	
Lowest 30%	59	41	1:1
Top 30%	85	15	1:6
Total	74	16	1:5

Pooling the results of more than 300 respondents shows the power of sifting on this key selection criteria. Applicants in the lowest quartile of the DSI score subsequently scored disproportionately lower in manager ratings in terms of their service orientation (Figure 1). Sifting them out would have improved the efficiency of the process by only allowing better candidates to proceed to the next round of the recruitment process.

5.3 Sifting for overall performance

A large retail chain, with headquarters in the UK and operations across Europe, the USA, and Asia, wanted to open new stores in each geographical region and improve the productivity of the store-opening recruitment process. To achieve this, situational judgment tests (SJTs) were used for effective and efficient sifting. These tests use descriptions of real-life workplace situations to which respondents were asked to choose an appropriate response (Motowildo *et al.*, 1990). SJTs are effectively low-level simulations.

Since their introduction by Motowildo *et al.* (1990), a large body of research has suggested that SJTs are valid and have many practical uses (for a review, see McDaniel *et al.*, 2001). At a more general level, Bateson and Hui (1992) showed that simulations have validity as stimuli for consumer choices. Much of this work has focussed on using SJTs to predict a single external criterion variable. Recently, there has been growing interest in using SJTs to measure different constructs (Schmitt and Chan, 2006; Konig *et al.*, 2007; Bledlow and Frese, 2009). To develop the SJT for this project, workshops with subject matter experts (store managers) were carried out to develop job-specific competency profiles. The example of such job-specific competencies developed for this project. Workshops with 100 subject matter experts in the UK, Turkey, and the USA are as follows.

Competency Profile:

- working with people;
- relating and networking;

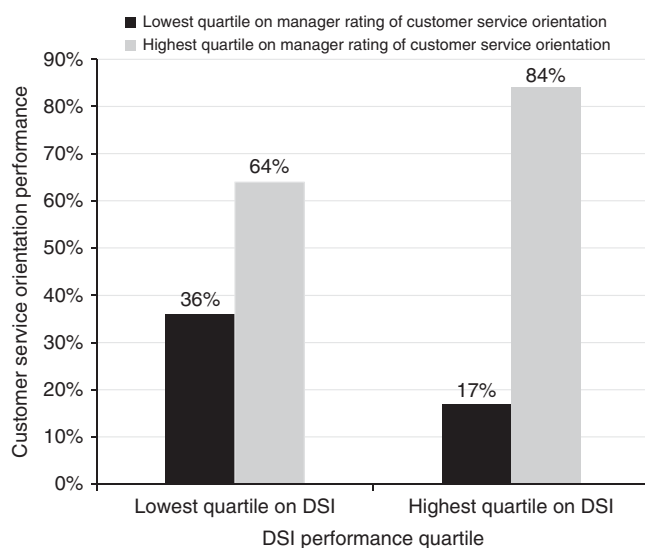


Figure 1.
Sifting for customer orientation

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- adhering to principles and values;
- adapting and responding to change;
- coping with pressure; and
- delivering and meeting expectations.

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Groups of store managers were asked to identify specific examples of good and bad customer service and to describe them in the form of scenarios. A different group of managers then rated the scenarios on whether they illustrated a particular competency from the competency profile. The results were combined to develop a test with 17 scenarios to be rated. Such scenarios can be presented as text, videos, or avatar graphics. In this case, a simple text description was used (as an example, see). Such questions can avoid adverse impacts arising from discrimination on race, gender, education, and so forth. A supermarket SJT example.

A customer has accidentally broken a bottle of wine. There is broken glass and wine spreading across the floor. One of your colleagues is helping the customer. You still have to re-fill a lot of shelves before your lunch break.

Do you?

(a) Watch your colleague for a moment to see if your help is needed

(b) Help your colleague deal with the situation by calling the cleaning staff

(c) Stay focused on completing your current task of refilling the shelves in time

A sample of 342 staff members from three continents completed the instrument. At the same time, they were rated by their line managers on the same set of competencies. The results appear in Table V in the form of simple correlations.

Using the overall performance rating as the key criterion variable to demonstrate the power of sifting, Figure 2 shows the relationship between this variable and the quartiles of the SJT. Again, the results show that sifting out the bottom quartile of scores would remove a significant number of unsuitable applicants and improve the quality of the resultant pool. For example, 63 percent of candidates in the bottom quartile were rated as low performers by their managers, compared with only 4 percent of those rated in the top quartile on that test.

The sifting tool was subsequently deployed as part of the recruitment process for the opening of a new store. Removing the bottom quartile of candidates before reviewing resumes saved managerial time by improving the quality of the candidates

Table V.
SJT scores vs manager ratings of displayed competencies

Criterion measure	Predictive		Concurrent		Sample weighted average <i>n</i> = 342
	UK <i>n</i> = 70	UK <i>n</i> = 78	Turkey <i>n</i> = 93	US <i>n</i> = 101	
Working with people	0.38	0.35	0.31	0.25	0.32
Adhering to principles and values	0.18	0.28	0.55	0.21	0.32
Relating and networking	0.52	0.37	0.36	0.29	0.38
Meeting customer expectations	0.28	0.46	0.22	0.26	0.30
Adapting to change	0.19	0.38	0.26	0.32	0.29
Coping with pressure	0.18	0.38	0.43	0.10	0.28
Overall job performance	0.40	0.47	0.36	0.28	0.37

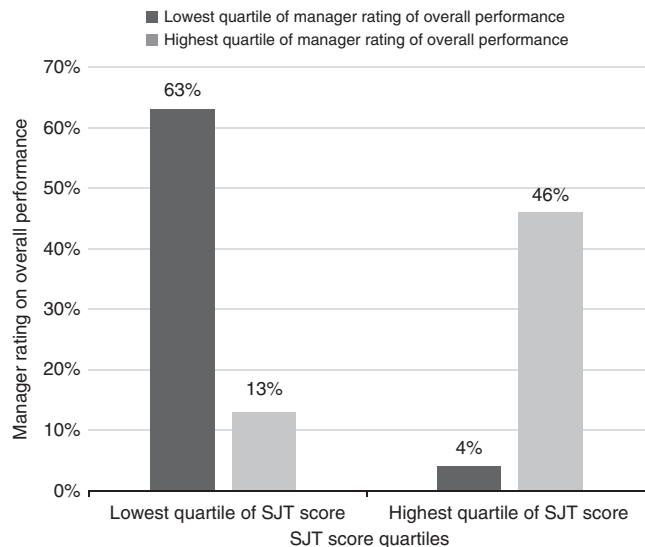


Figure 2.
Differences in overall
performance by SJT rating

going through to the later stages of the process. The SJT reduced the ratio of manager interviews for a successful hire from 6:1 to 2:1. This resulted in a savings of approximately 73,000 hours of management time, representing a \$1.8 million cost saving on setting up a store.

6. How to develop an effective sifting tool

We next detail the steps involved in developing sifting tools so that service firms can determine whether to use our proposed approach. Use of psychometric tests for sifting requires not only a change in thinking but also an adaptation of the normal process of using psychometric tests. Many of the steps are the same in the traditional recruitment process, but some have a different orientation, as we discuss next in the four steps of developing effective sifting tools.

6.1 Step 1: development of a job profile

The first step in the use of any psychometric instrument is normally to create a suitable competency profile for the role. This defines, in terms of competencies, the key behaviors that would be needed in the role. Such a definition is not specific to the use of psychometric tests but should be standard practice in any rigorous recruitment process.

Theoretically, a sifting test requires only that the competencies being sifted are validly a minimum requirement for the role. However, because sifting is part of the total recruitment process and should not be used alone, it is more practical to develop a full profile and, within that, to select the sifting competencies.

The time needed in this stage of the process depends on the importance of the role and the legal and regulatory environment surrounding discrimination in this role, industry, or country. At its simplest, managers or subject matter experts can be asked to undertake an online card-sorting task based on a standard set of universal competencies. Several organizations (e.g. the CEB) have developed universal competencies using empirical data that suggest that all roles can be captured with the same set of competencies (in the case of the CEB universal competency framework, by more than 100) and that roles vary only in the selection of competencies and the

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weights given to them. Using this approach, subject matter experts select the relevant competencies for the role, and their results are pooled to create the final profile.

At its most complex, job profiling can involve an outside consultant, interviewing and testing employees, and developing customized competencies and the profile. The latter may take several weeks to complete.

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6.2 Step 2: choosing screening competencies

Unlike in traditional job profiling, the purpose of screening is to select one or more competencies on which to select out candidates. In some financial services roles, for example, numerical reasoning ability is an absolute minimum requirement. It is therefore possible to select out on the basis of a simple reasoning test that previously might have been used much later in the recruitment process. A screening system can therefore be established using a standard numerical reasoning test for the appropriate educational level of the candidates.

The DSI is designed to select out on the basis of common basic requirements for many service roles (e.g. dependability, safety). In other instances, such as the supermarket example, many individual competencies are assessed and candidates selected out on the basis of an aggregate score.

6.3 Step 3: deciding on the degree of customization for the assessment

The next major step is determining the extent to which standardized instruments can be used or whether it is necessary to develop unique ones. Common standardized instruments are published by major suppliers and come with validation studies and a large list of standardized norms with which candidates can be compared. However, such standardization runs the risk that these instruments are not specific enough for the role or context.

In contrast, customized instruments could be developed to fit the role and context exactly. However, such tests must be carefully validated against large samples of candidates and, even then, might not allow comparison against a large group of norms with which candidates can be compared. Customized test development is clearly a long and expensive process and generally only done for specific and high-impact roles requiring the sifting of many candidates.

The supermarket example used a set of competences selected from a universal competency framework, but the actual scenarios were customized to the specific context of the supermarket to be opened. Such a level of customization allowed for cultural differences between countries where the test was to be used.

An alternative approach would have been to use standardized SJTs that have been developed for customer service roles. These require much less time, effort, and cost to develop but are obviously only applicable for generic roles. For example, the range of IRIS SJTs (see www.talents.co.uk/select/iris-situational-judgement-tests) covers many different roles, including customer service, and uses text descriptions to describe the situations.

6.4 Step 4: choice of questionnaires or SJT's

Psychometric testing grew through the development of standardized questionnaires designed to elicit an individual's personality or underlying ability. The more modern SJTs offer individual choices based on different scenarios or situations and infer from the choices their underlying competencies.

The choice of whether to use a questionnaire or an SJT for a particular role is mostly based on cost and convenience, since the quality of the results is largely the same.

SJTs offer more realism for the candidate but are less efficient as measuring tools. As a result, candidates may need to spend more time for the same amount of selection data to be generated. Furthermore, if sophisticated video or avatar simulations are integrated into SJTs, candidates must have computer access and sufficient bandwidth. SJTs, especially if customized, are expensive to deploy and, for certain roles, may not be worthwhile, and therefore questionnaires would be the preferred sifting tool. Especially for low-level roles, the cost of selection and the time taken for the selection process must be weighed against the cost of a poor hire.

7. Conclusions, implications, and further research

The growth in job boards and the global economic slowdown have dramatically increased the number of candidates applying for service roles. There is a veritable tsunami of applicants swamping service companies that advertise a customer service job opening, and recruitment departments must continue to hire large numbers of staff to fill vacancies created by the high levels of churn that characterize these jobs.

Traditional recruitment processes are put under severe strain when trying to tackle this problem. However, by standing the traditional recruitment process “on its head” and using web-delivered, short, powerful psychometric tests at the start of the recruitment process, efficiency can be significantly improved while also maintaining or even increasing its effectiveness.

Efficient and effective psychometric sifting tests require careful development that can incur significant upfront costs. These development costs mean that a critical volume of hiring decisions is a prerequisite for the suggested approach to be cost-effective. However, as described in the development process, this approach is relatively straightforward, and the time, effort and money that need to be invested are under control of the HR department.

Organizations used to deploying psychometric instruments are already familiar with the issues involved. Those that are not may well need professional advice in setting up the screens. In either case, the potential benefits are significant. There are large potential recruitment cost savings in such deployment, and the results of our study suggest that the process will also produce excellent short lists of potential employees.

There is a significant body of research on selection tools, such as on the validity, reliability, effectiveness, transparency, fairness, and adverse impact of SJTs and other psychometric tests. This research even extends to the selection of service employees. However, academic literature has largely ignored the efficiency of the hiring process itself. The costs of recruiting subordinate service employees relative to the total costs of the business have not been researched (for an exception see Ulrich *et al.*, 1991). Although there are frameworks for estimating the true cost of churn (Tracey and Hinkin, 2006), little attempt has been made to develop activity-based cost estimates across different service firms. This is surprising because the previously mentioned Sears example suggests that recruitment costs alone constituted 17 percent of the firm’s turnover and therefore could be a major issue for many service firms. The logical extension of such an analysis would be to examine best practices across different parts of the service sector and assess the efficiency and effectiveness of different approaches for filling these service roles.

The impact of good hiring on the quality of service and intervening variables, such as “climate for service,” is an emerging research area. In their recent review of the service climate research, Bowen and Schneider (2014) argued that the selection and development of suitable competencies can serve as antecedents of the service climate.

Sifting raises its own set of research topics. Selecting “minimum requirement” competences accelerates the process but is a new logic and one that has not been researched. The DSI model goes further and assumes that the same limited number of competencies can be used across different service roles. The studies described in this paper prove the logic and suggest the need for additional research in services on the OCB model on which DSI was based. Bettencourt and colleagues (Bettencourt and Brown, 1997; Bettencourt *et al.*, 2001) examined customer-focussed OCB and established its relationship to customer-focussed outputs. Schneider *et al.* (2005) found that a climate for service is linked to customer experiences through customer-focussed OCB. The DSI assessment suggests that it is possible to screen for individuals with a higher propensity to display customer-focussed OCB. The role of selection based on OCB is worthy of further research.

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